

IN THE CLAIMS

**The claims are not amended. They are presented here for the Examiner's convenience.**

Claim 1 (Previously Presented): A deagglomerated barium sulphate comprising a dispersant, primary particles, and secondary particles, wherein said primary particles comprise a crystallization inhibitor and have an average size  $< 0.1 \mu\text{m}$ , wherein the crystallization inhibitor and the dispersant are different compounds and wherein the dispersant comprises at least one anionic group and is substituted by at least one polyether group.

Claim 2 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein 90% of the secondary barium sulphate particles are smaller than 250 nm.

Claim 3 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein the crystallization inhibitor is selected from compounds having at least one anionic group.

Claim 4 (Previously Presented): The deagglomerated barium sulphate according to Claim 3, wherein the anionic group of the crystallization inhibitor is at least one sulphate, at least one sulphonate, at least two phosphate, at least two phosphonate or at least two carboxylate group(s).

Claim 5 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein the crystallization inhibitor is a compound of the formula (I) or salt thereof having a carbon chain R and n substituents



in which R is an organic radical which has hydrophobic and/or hydrophilic moieties, R being a low molecular mass, oligomeric or polymeric, optionally branched and/or cyclic carbon chain which optionally contains oxygen, nitrogen, phosphorus or sulphur heteroatoms, and/or being substituted by radicals which are attached via oxygen, nitrogen, phosphorus or sulphur to the radical R, and

A being C, P(OH), OP(OH), S(O) or OS(O),  
and n being 1 to 10 000.

Claim 6 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein the crystallization inhibitor is a carboxylic acid having at least two carboxylate groups and at least one hydroxyl group, an alkyl sulphate, an alkylbenzenesulphonate, a polyacrylic acid or an optionally hydroxy-substituted diphosphonic acid.

Claim 7 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein the dispersant has one or more anionic groups selected from carboxylate, phosphate, phosphonate, bisphosphonate, sulphate and sulfonate groups.

Claim 8 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein the dispersant endows the barium sulphate particles with a surface which

prevents reagglomeration and/or inhibits agglomeration electrostatically, sterically or both electrostatically and sterically.

Claim 9 (Previously Presented): The deagglomerated barium sulphate according to Claim 8, wherein the dispersant has carboxylate, phosphate, phosphonate, bisphosphonate, sulphate or sulphonate groups which are able to interact with the barium sulphate surface and which have one or more organic radicals  $R^1$  which have hydrophobic and/or hydrophilic moieties.

Claim 10 (Previously Presented): The deagglomerated barium sulphate according to Claim 9, wherein  $R^1$  is a low molecular mass, oligomeric or polymeric, optionally branched and/or cyclic carbon chain which optionally contains oxygen, nitrogen, phosphorus or sulphur heteroatoms and/or is substituted by radicals which are attached via oxygen, nitrogen, phosphorus or sulphur to the radical  $R^1$  and the carbon chain is optionally substituted by hydrophilic or hydrophobic radicals.

Claim 11 (Previously Presented): The deagglomerated barium sulphate according to Claim 9, wherein the dispersant is a phosphoric diester having a polyether group and a C6-C10 alkenyl group as moieties.

Claim 12 (Previously Presented): The deagglomerated barium sulphate according to Claim 9, wherein the dispersant has groups for coupling to or into polymers.

Claim 13 (Previously Presented): The deagglomerated barium sulphate according to Claim 12, wherein the dispersant prevents reagglomeration sterically and is a polymer which

is substituted by polar groups, and as a result thereof the barium sulphate particles are externally hydrophilicized.

Claim 14 (Previously Presented): The deagglomerated barium sulphate according to Claim 13, wherein the dispersant has polyether groups substituted by hydroxyl groups or amino groups.

Claim 15 (Previously Presented): The deagglomerated barium sulphate according to Claim 14, wherein the hydroxyl groups and amino groups function as reactive groups for coupling to or into polyepoxide resins.

Claim 16 (Previously Presented): The deagglomerated, additionally deagglomerable barium sulphate according to Claim 15, wherein the dispersant is a polyether polycarboxylate which is substituted terminally on the polyether groups by hydroxyl groups.

Claim 17 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein the crystallization inhibitor and the dispersant are each present in the deagglomerated barium sulphate in an amount of up to 2 parts by weight per part by weight of barium sulphate.

Claim 18 (Previously Presented): The deagglomerated barium sulfate according to Claim 1, wherein it is obtained

a) by wet-grinding a barium sulphate precipitated using a crystallization inhibitor, the wet grinding taking place in the presence of the dispersant, or

b) by precipitating barium sulphate in the presence of a crystallization inhibitor and of a dispersant which prevents reagglomeration and/or inhibits agglomeration electrostatically, sterically, or both electrostatically and sterically.

Claim 19 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein it is in the form of a suspension in water, in an organic liquid, in a mixture of water and organic liquid, or as a suspension in a plastics premix, it being possible for stabilizing additives to be present.

Claim 20 (Previously Presented): The deagglomerated barium sulphate in the form of a suspension according to Claim 19, wherein it is present in the suspension in an amount of 0.1 % up to 70% by weight.

Claim 21 (Previously Presented): A dry powder which can be redispersed to form deagglomerated barium sulphate, obtainable by drying deagglomerated barium sulphate according to Claim 1.

Claim 22 (Previously Presented): A process for preparing deagglomerated barium sulphate according to Claim 1, wherein

a) precipitated barium sulphate having a primary particle size of  $< 0.1 \mu\text{m}$  is deagglomerated and optionally dried in the presence of a dispersant and water or an organic liquid or a mixture thereof, starting from barium sulphate precipitated in the presence of a crystallization inhibitor, or

b) barium sulphate having a primary particle size of  $< 0.1 \mu\text{m}$  is precipitated in the presence of a crystallization inhibitor and a dispersant which prevents reagglomeration and/or inhibits agglomeration, and is optionally dried.

Claim 23 (Previously Presented): The process according to Claim 22, wherein barium sulphate with a primary particle size  $< 0.1 \mu\text{m}$  is precipitated or used and the barium sulphate is optionally deagglomerated until 90% of the secondary particles are  $< 1 \mu\text{m}$ .

Claim 24 (Previously Presented): The process according to Claim 22, wherein the deagglomerated barium sulphate is dried and/or processed, optionally with addition or removal of water, an organic liquid or a mixture of both, to give a suspension which contains water or an optionally water-containing organic liquid.

Claim 25 (Previously Presented): A plastics premix comprising deagglomerated barium sulphate according to Claim 1.

Claim 26 (Previously Presented): A method of use of deagglomerated barium sulphate according to Claim 1 for producing plastics or adhesives.

Claim 27 (Previously Presented): A plastic or adhesive comprising deagglomerated barium sulphate according to Claim 1.

Claim 28 (Previously Presented): A curable composition comprising at least one curable constituent selected from the group consisting of low molecular mass, oligomeric and polymeric compounds and deagglomerated barium sulphate according to Claim 1.

Claim 29 (Cancelled)

Claim 30 (Previously Presented): The barium sulphate according to Claim 1, wherein the barium sulphate has a primary particle size of  $< 30$  nm.

Claim 31 (Previously Presented): The barium sulphate according to Claim 1, wherein the barium sulphate has a BET surface area of at least  $30 \text{ m}^2/\text{g}$ .

Claim 32 (Previously Presented): The barium sulphate according to Claim 1, wherein the crystallization inhibitor is citric acid.

Claim 33 (Cancelled)

Claim 34 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein 90% of the secondary barium sulphate particles are smaller than  $2 \text{ }\mu\text{m}$ .

Claim 35 (Previously Presented): The deagglomerated barium sulphate according to Claim 1, wherein the crystallization inhibitor and the dispersant are each present in the deagglomerated barium sulphate in an amount of 1% to 50% by weight per part by weight of barium sulphate in each case.

Claim 36 (Previously Presented): The deagglomerated barium sulphate according to Claim 19, wherein a stabilizing additive is present and is a carboxylic acid.